

AMENDMENTS TO THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

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1. (original) A composite material comprising:
a matrix phase; and
a coupled fiber reinforcement structure formed of at least one high aspect ratio fiber wherein said coupled fiber reinforcement structure has an aspect ratio of less than ten.
 2. (currently amended) The composite material of Claim 1 wherein the coupled fiber reinforcement structure comprises a pair of fibers adjoined by a bond, said ~~joint structure capable of maintaining the cross structure~~ the bond having sufficient strength to retain the fibers in the coupled fiber reinforcement structure during a molding process.
 3. (currently amended) The composite material of Claim 1 wherein the ~~multi-dimensional array~~ coupled fiber reinforcement structure forms a triangular structure.
 4. (currently amended) The composite material of Claim 1 wherein the ~~multi-dimensional array~~ coupled fiber reinforcement structure forms a square structure.

5. (currently amended) The composite material of Claim 1 wherein said coupled fiber reinforcement structure ~~is formed by~~ comprises a first and second pair of parallel fibers, said first and second pair being coupled orthogonal to each other.

6. (original) The composite material of Claim 1 wherein said fibers are selected from the group consisting essentially of carbon fiber, glass fiber, and kevlar.

7. (original) The composite material of Claim 1 wherein said matrix is a thermosettable polymer.

8. (currently amended) The composite material of Claim 7 wherein the matrix material is a selected from the group of: epoxy resin, polyester resins, vinyl-ester resins, and phenolic resins.

9. (currently amended) The composite material of Claim 7 wherein the matrix material is a selected from the group of: polyimides, bismaleimides, and polybenzimidazoles.

10. (original) The composite material of Claim 1 wherein said matrix is a thermformable polymer.

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11. (currently amended) The composite material of Claim 10 wherein the matrix material is selected from the group of: polycarbonates, polysulphones, polyether-ether-ketone and polyamides.

12. (original) The composite material of Claim 1 wherein said coupled fiber reinforcement structure has an aspect ratio of less than five.

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13. (original) The composite material of Claim 1 wherein said coupled fiber reinforcement structure has an aspect ratio of about one.

14. (original) The composite material of Claim 1 wherein said coupled fiber reinforcement structure has a height to width ratio of about one.

15. (currently amended) A coupled fiber reinforcement structure comprising:
a pair of fibers adjoined by a joint, said joint structure capable of maintaining the ~~cross~~ coupled fiber reinforcement structure during a molding process; wherein said coupled fiber reinforcement structure has an aspect ratio of less than ten.

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16. (currently amended) The coupled fiber reinforcement structure of Claim 15 is formed by comprises a first and second pair of parallel fibers, said first and second pair being coupled orthogonal to each other.

17. (original) The coupled fiber reinforcement structure of Claim 15 wherein said fibers are selected from the group consisting essentially of carbon fiber, glass fiber, and kevlar.

18. (cancelled)

19. (new) The coupled fiber reinforcement structure of Claim 1, wherein the high aspect ratio fiber has a length in the range of 0.2 to 0.8 millimeters.

20. (new) The coupled fiber reinforcement structure of claim 19, wherein the high aspect ratio fiber has a diameter in the range of five to twenty micrometers.